

**STATE OF UTAH  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER QUALITY  
UTAH WATER QUALITY BOARD  
SALT LAKE CITY, UTAH 84114-4870**

**GROUND WATER DISCHARGE PERMIT  
Permit No. UGW230003**

In compliance with the provisions of the Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated 1953, as amended, the Act,

**PACIFICORP  
201 South Main Street  
Suite 2200  
Salt Lake City, Utah 84111**

Hereafter referred to as the "Permittee," is granted a ground water discharge permit for the operation of the Currant Creek Power Plant in Juab County, Utah.

The Currant Creek Power Plant is located on a tract of land encompassed in Sections 25 & 26, Township 11 South, Range 1 West, Salt Lake Base and Meridian. (111° 53' 36" W. Long. and 39° 49' 17" N. Lat.)

The permit is based on representations made by the permittee and other information contained in the administrative record. It is the responsibility of the permittee to read and understand all provisions of this permit.

The facility shall be maintained and operated in accordance with conditions set forth in the permit and the Utah Ground Water Quality Protection Regulations.

This permit shall become effective on April 08, 2009.

This permit and the authorization to operate shall expire at midnight, April 08, 2014.

Signed this 31<sup>st</sup> day of March, 2009.

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Leah Ann Lamb  
Acting Executive Secretary  
Utah Water Quality Board

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	-Table 2: Facility Point Source Components and Operational Monitoring Points (Rev. 9/2008)	
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Applicable PacifiCorp Operations Documents for this permit include but are not limited to:		
	-Appendix A: Best Management Practices Plan (Rev. 9/2008)	
	-Appendix B: BAT Monitoring Plan (Rev. 10/2008)	
	-Appendix C: Leak Detection and Repair Plan (Rev. 3/2008)	

## **I. SPECIFIC PERMIT CONDITIONS**

### **A. Ground Water Classification and Protection Levels**

The ground water classification for the unconfined aquifer in the area of the Currant Creek Power Plant is generally Class II drinking water quality ground water. Ground water at the site has been classified based on monitoring data collected from upgradient well MW-1.

The Permittee shall operate the facility such that the ground water standards (UAC R317-6.2) and aquifer protection levels in Table 1 that were developed for this permit are not exceeded in the unconfined aquifer underlying the facility or other aquifers that may be impacted by facility operations. The ground water regulations also contain standards for contaminants such as metals, pesticides and volatile organic compounds. Accordingly, the permittee must not discharge these or any other contaminants which could impair beneficial uses of the ground water, even though the permit does not require monitoring for them.

### **B. Permitted Facilities**

The Facilities authorized under this permit are listed in Table 2. These facilities constitute those, not permitted by rule, where there is potential for release of fluids to ground water. The facilities in Table 3 under the "Permit-By-Rule" heading are for unit processes not specifically addressed by this permit. However, no discharge of pollutants from these sites to ground water is allowed.

The Currant Creek Power Plant process water evaporation pond will be operated according to the specifications, plans and drawings (Table 4) included in the permit application received in December 2003 and approved by the Division of Water Quality in March 2004.

### **C. Best Available Technology Performance Standard**

The enforceable performance standard for this permit to achieve protection of ground water quality will be no discharge of process fluids to ground water from the permitted facilities listed in column 1 of Table 2. The Permittee is responsible for implementing and maintaining the best available technology noted in column 3 (BAT Description) of Table 2 to prevent discharge of process fluids from the permitted facilities to ground water. Maintenance of this performance standard will be demonstrated by:

1. Operation and maintenance of the Evaporation Pond leak collection and removal systems as specified in Table 2.
2. Adherence to the performance criteria in Table 2 (column 5)

3. PacifiCorp shall operate the Currant Creek Power Plant in accordance with the Best Management Practices plan (BMP). Implementation of the BMP (Appendix A) will ensure proper handling of facility process water, prompt clean up of any releases, and an ongoing inspection and maintenance program for facilities included in this permit.
4. Closure - The evaporation pond shall undergo closure in accordance with the closure plan submitted in Section 6.4 of the permit application. This plan will be updated as needed prior to permit renewal.

D. Monitoring

1. General Provisions

- a) *Future Modification of the Leak Detection Monitoring Network* - If at any time the Executive Secretary determines the monitoring program to be inadequate, PacifiCorp shall submit within 30 days of receipt of written notice from the Executive Secretary a modified monitoring plan that addresses the inadequacies noted by the Executive Secretary.
- b) *Compliance Monitoring Period* - Monitoring shall commence upon issuance of this permit and shall continue through the life of this permit. For facilities that are constructed during the term of this permit, monitoring shall commence upon initiation of operation of the new facility.
- c) *Laboratory Approval* - All water quality analyses shall be performed by a laboratory certified by the State of Utah to perform such analysis.
- d) *Water Level Measurement* - In association with each well sampling event, water level measurements shall be made in each monitoring well prior to removal of any water from the well bore. These measurements will be made from a permanent single reference point clearly marked on the top of the well or surface casing. Measurements will be made to the nearest 0.01 foot.
- e) *Sampling Protocol* - Water quality samples will be collected, handled and analyzed in conformance with the currently approved version of the Best Available Technology Monitoring Plan (Appendix B).
- f) *Constituents Sampled* - The following analysis shall be performed on all monitoring samples collected:
  - i) Field Measurements: pH, specific conductance, temperature
  - ii) Laboratory Analysis:

- Major Ions: Ammonia, bicarbonate, calcium, chloride, fluoride, magnesium, nitrate, potassium, sodium, and sulfate.
- TDS (Total Dissolved Solids)

2. BAT Performance Monitoring

- a) PacifiCorp shall verify the operation of the BAT designated for each facility component listed in Table 2 with an inspection and maintenance program. Documentation of compliance with this program shall be maintained on site for review by representatives of the Division.
- b) PacifiCorp shall monitor the performance of each facility component that utilizes a leak collection and removal system in accordance with the BAT Performance Monitoring Plan (Appendix B). The results of this monitoring shall be reported in accordance with the schedule in Part I Section F.

3. Operational Monitoring

- a) PacifiCorp shall characterize the fluids contained in the Facility Components listed in Table 2 with a representative grab samples.
- b) *Monitoring Frequency* – Water samples from the evaporation pond shall be collected semi-annually. Operational monitoring for other facility components listed in Table 2 shall occur two times during the five-year term of this permit. The first sampling event shall occur in the second year of the permit term. The second sampling will be conducted in the last year of the permit term. Summary results of operational monitoring data from the second sampling shall be included with the application for permit renewal every five years.

4. Well Monitoring Frequency

Well MW-1 shall be sampled once every five years, in the quarter preceding submission of the application for permit renewal. Any new compliance monitoring wells that may be required by the Division of Water Quality will be sampled a minimum of eight times within 12 consecutive months following installation to establish baseline ground water quality.

E. Demonstration of Compliance

1. Unit Processes with Leak Collection and Removal

- a) *Performance Criteria* - PacifiCorp shall operate the facilities listed in Table 2 in accordance with the performance criteria noted therein. All instances where a performance criteria is exceeded shall be reported in the semi-annual facility monitoring report.
- b) *Response to a Leak* - Upon determination that maximum water levels or leakage rates specified in the performance criteria from Appendix C have been exceeded, PacifiCorp shall immediately remove fluid from the affected leak collection system to a level below the allowable maximum fluid level specified in Appendix C and determine the leakage rate entering the leak collection system. If the cause of the high level alarm or leakage rate can be repaired within 48 hours of detection of the alarm condition, PacifiCorp is not obligated to undertake items i through iv of Part I Section E 1.b. If the cause of the high level alarm or leakage rate cannot be repaired within 48 hours of detection of the alarm condition, PacifiCorp shall undertake the following actions:
  - i) Sample the effluent from the collection system for water quality field and lab constituents noted in Part I Section D 1(f) and submit the analytical results in the next semi-annual facility monitoring report.
  - ii) Notify the Executive Secretary in writing within 5 days that a performance criteria has been exceeded and what the measured leakage rate in the affected leak collection system is.
  - iii) If the leakage rate exceeds the maximum rate specified in Appendix C, PacifiCorp shall implement the approved Leak Detection and Repair plan (Appendix C).
  - iv) Remove fluids from any affected leak collection system on a continuous basis to maintain fluid levels less than the specified maximum in Appendix C.
- c) *Out of Compliance Status* - Exceeding a performance criteria specified in Table 2 Column 4 shall be a violation of this permit unless:
  - i) PacifiCorp has conformed with the provisions of Part I Section E.1.b of this permit.
  - ii) The failure of BAT was not intentional or caused by PacifiCorp's negligence, either in action or in failure to act.

- iii) PacifiCorp implements the Leak Detection and Repair Plan within the time frames specified by the plan.
- iv) The assessment performed under the Leak Detection and Repair Plan indicates no reason to expect a release in excess of de minimus quantities to ground water has occurred.

2. Unit Processes with Best Management Practices

PacifiCorp shall operate the Facility components listed in Table 2 in accordance with the Best Management Practices specified in Appendix A.

3. Evaporation Pond Overflows

If water from evaporation pond or facility components should overflow into the site storm water pond, PacifiCorp shall:

- i) Notify the Executive Secretary of any process water releases to the storm water ponds or to the environment. Reporting shall follow the requirements of Part II, as applicable. Include information about the duration of the event and estimated volume released.
- ii) Sample the overflow effluent in the storm water pond for water quality field and lab constituents identified in Part I Section D.1.f. The Division of Water Quality shall be notified immediately by phone and the results of sampling shall be reported in the semi-annual facility monitoring report.
- iii) The date and duration of all process water overflows shall be reported in the semi-annual facility monitoring report.
- iv) Remove fluids from the storm water ponds or other containment and return to the process water system.

F. Reporting Requirements

1. Reporting

Leak detection, operational monitoring, and water quality sampling results shall be submitted semi-annually to the Executive Secretary as follows:

<u>Quarter</u>	<u>Report Due On</u>
1 <sup>st</sup> and 2nd	(January- June) August 15
3 <sup>rd</sup> and 4th	(July – December) February 15

Unless a submittal date extension has been requested by PacifiCorp and granted by the Division of Water Quality, failure to submit reports within the time frame due shall be deemed as noncompliance and may result in enforcement action.

2. Electronic Filing Requirements - The permittee will electronically submit the required ground water monitoring data in the electronic format specified by the Executive Secretary. The data should be in an Adobe PDF document sent by e-mail, CD, or other approved transmittal mechanism.

G. Compliance Schedule

1. There are no compliance schedule items at time of permit renewal.



## II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

- A. Representative Sampling. Measurements and samples taken in compliance with the monitoring requirements established under Part I shall be representative of the monitored activity.
- B. Analytical Procedures. Water sample analysis must be conducted according to test procedures specified under UAC R317-6-6.12, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Reporting of Monitoring Results. Monitoring results obtained for each monitoring period specified in the permit, shall be submitted to the Executive Secretary, Utah Division of Water Quality at the following address no later than 45 days after the end of the monitoring period:

State of Utah  
Division of Water Quality  
Department of Environmental Quality  
P.O. Box 144870  
Salt Lake City, Utah 84114-4870  
Attention: Ground Water Protection Program  
**electronic address: [rherbert@utah.gov](mailto:rherbert@utah.gov)**

- E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- F. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using approved test procedures as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted. Such increased frequency shall also be indicated.
- G. Records Contents. Records of monitoring information shall include:
  - 1. The date, exact place, and time of sampling or measurements;
  - 2. The individual(s) who performed the sampling or measurements;
  - 3. The date(s) and time(s) analyses were performed;
  - 4. The individual(s) who performed the analyses;
  - 5. The analytical techniques or methods used; and,
  - 6. The results of such analyses.
- H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and copies of all

reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time.

I. Twenty-four Hour Notice of Noncompliance and Spill Reporting.

1. The permittee shall verbally report any noncompliance, or spills subject to the provisions of UCA 19-5-114, which may endanger public health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the Utah Department of Environmental Quality 24 hour number, (801) 536-4123, or to the Division of Water Quality, Ground Water Protection Section at (801) 538-6146, during normal business hours (7:00 am - 6:00 pm Mountain Time Monday through Thursday).
2. A written submission shall also be provided to the Executive Secretary within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
  - a. A description of the noncompliance and its cause;
  - b. The period of noncompliance, including exact dates and times;
  - c. The estimated time noncompliance is expected to continue if it has not been corrected; and,
  - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
3. Reports shall be submitted to the addresses in Part II D, Reporting of Monitoring Results.

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours, shall be reported at the time that monitoring reports for Part II D are submitted.

K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

### III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under Section 19-5-115(2) of the Act a second time shall be punished by a fine not exceeding \$50,000 per day. Nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

#### IV. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when the alteration or addition could significantly change the nature of the facility or increase the quantity of pollutants discharged.
- B. Anticipated Noncompliance. The permittee shall give advance notice of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a permit renewal or extension. The application should be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.
  - 1. All permit applications shall be signed as follows:
    - a. For a corporation: by a responsible corporate officer;
    - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
    - c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
  - 2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized

representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,
- b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to Authorization. If an authorization under Part IV G 2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part IV G 2. must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

- I. Availability of Reports. Except for data determined to be confidential by the permittee, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Executive Secretary. As required by the Act, permit applications, permits, effluent data, and ground water quality data shall not be considered confidential.

- J. Property Rights. The issuance of this permit does not convey any property rights of

any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

- K. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- L. Transfers. This permit may be automatically transferred to a new permittee if:
1. The current permittee notifies the Executive Secretary at least 30 days in advance of the proposed transfer date;
  2. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
  3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- M. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, penalties established pursuant to any applicable state law or regulation under authority preserved by Section 19-5-117 of the Act.
- N. Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. If new ground water standards are adopted by the Board, the permit may be reopened and modified to extend the terms of the permit or to include pollutants covered by new standards. The permittee may apply for a variance under the conditions outlined in R317-6.4(D)
  2. If alternate compliance mechanisms are required.
  3. If water quality of the facility is significantly worse than represented in the original permit application.

**TABLE 1**

CURRANT CREEK POWER PLANT  
PROTECTION LEVELS FOR GROUNDWATER

PARAMETER	AQUIFER PROTECTION LEVEL mg/L
Total Dissolved Solids (TDS) *	1200
Sulfate	125
Bicarbonate	112
Total Nitrate/Nitrite (as N)	5.25
pH (units)	6.5 – 8.5

\* Class II protection level are 1.25 times the background level observed in the shallow aquifer



**TABLE 2**

**Currant Creek Power Plant**  
**Point Source Components and Operational Monitoring Sites** Revised 9/29/08

Facility Component	Fluids Handled	BAT Description	Operation and Maintenance	Performance Criteria
Process Water Discharge Ponds	1. Collection Sump	3 cells 4 sumps/cell Double synthetic liner with leak detection	Inspections per BMP plan  Appendix B Appendix C	<p>Prompt repair of leaks</p> <p>Adherence to BMP plan</p>
Collection Sump	1. R.O Concentrate 2. Multimedia Filter 3. Air Vents 4. Scour Air 5. Evaporative Make-up Tank Overflow 6. Water Treatment Building Floor Drains 7. Waste from pH Analyzers 8. CIP cartridge drains 9. Permeate Break Tank Drains/Overflow 10. Ion Exchanger Drains (no resin) 11. Oil/Water Supernatant Sump 12. Auxiliary Boiler Blowdown/Drains from tanks 13. 1A/AB HRSG Blowdown from tanks	Concrete Sump	Inspections per BMP plan	
Reverse Osmosis Clean in Place Sump	1. Reverse Osmosis Clean in Place Waste	Concrete Sump	Inspections per BMP plan	
Oil/Water Separator Supernatant Sump	1. Equipment Drains 2. Maintenance Areas Wash Wastewater 3. Reverse Osmosis Clean in Place Tanks 4. Excess Condensate from Condensate System 5. 1A/1B Evaporative Cooling System Blowdown/Drains 6. Tested non-hazardous CT Washwater	Concrete and Steel Sump	Inspections per BMP plan	
Turbine Washwater Sumps	Combustion Turbine (CT) Washwater	Concrete Sump	Inspections per BMP plan	

**TABLE 3****CURRENT CREEK POWER FACILITY****FEATURES PERMITTED BY RULE**

Facility	Fluids Handled	BAT Description	Operation and Maintenance	Performance Criteria
Raw Water tank	Raw water	Lined carbon Steel Tank (890 Carbogaurd lining material)	Inspections as per BMP plan	<ul style="list-style-type: none"> <li>• Prompt repair of leaks</li> <li>• Adherence to BMP plan (Appendix A)</li> </ul>
Demineralized Water storage tank	Demineralized water for process	Stainless Steel Tank (no liner)	Inspections as per BMP plan	<ul style="list-style-type: none"> <li>• Prompt repair of leaks</li> <li>• Adherence to BMP plan (Appendix A)</li> </ul>

**TABLE 4**  
**CURRENT CREEK POWER PLANT**

BAT Engineering Specifications

The plan and supporting information for the liner and leak detention systems complies with Utah Water Quality Rules, (R317, Utah Administrative Code) and is hereby approved.

The best available technology design standard shall be defined by, and construction to conform to the engineering plans summarized below:

Waste Stream and Flow Quantities

Type .....	Reverse osmosis
.....	Non-contact cooling water
.....	Evaporative cooler blow down
.....	Oil water separator supernatant
Storage .....	Total containment
Flow rate annual average .....	0.110 mgd
Flow rate summer maximum .....	0.177 mgd

Lagoon Sizing and Configuration

Description .....	One pond/Three cells /Four collection sumps per cell
.....	
Pond Volume .....	25.6 acre ft.
Pond Surface Area .....	19.2 acres
High Water Operating Depth .....	3 ft of active storage
Freeboard .....	3 feet.
Dike Width - Min.....	12 feet exterior & 8 interior feet
Interior Side Slope .....	3:1 horizontal to vertical
Exterior Side Slope .....	3:1 horizontal to vertical
Pond Bottom Slope .....	5 percent side and 2 percent length

Subsurface

Soil Foundation .....	Prepared Subgrade
Ground Water Depth.....	150 feet
Depth of pond below ground surface .....	6 to 10 feet

Synthetic Liners

Type high.....	High Density Polyethylene
Bottom Liner - Thick .....	60 mil
Drainage Mat.....	200 mil geonet
Top Liner - Thick .....	60 mil

### Leak Detection

Type ..... Gravel Sump  
 Volume, minimum ..... 1000 gallons  
 Pump ..... Automatically activated submersible sump pump  
 Leak Detection Probe ..... A part of the sump pump

The sump pump has its own leak detector. Allowable Leakage Rate of 200 gallons/acre/day or for 1.6 acres per sump is 320 gallons per day. To insure the pond will not overflow, water levels will be inspected each day. Leakage of fluids in the leak detection system greater than the allowable 213 gallons per day shall constitute a failure of Best Available Technology and a violation of this Permit.

Maximum Allowable Head.....2 feet

The Permittee shall measure fluid head in the leak detection sumps and under no circumstance shall fluid head in the leak detection system sump exceed a 2-foot level above the lowest point in the lower flexible membrane liner. The occurrence of leak detection system fluid levels above this 2-foot limit shall constitute failure of Best Available Technology and a violation of this Permit.

### Monitoring of Evaporation Pond

The Permittee shall calculate an average daily leakage volume across a consecutive 6-day period. The Permittee shall perform this calculation for each collection sump weekly. The Permittee shall maintain written records of the findings of these daily inspections on site.

The pond is designed to totally contain the waste streams and precipitation that falls directly onto the pond. Water leaves the pond through evaporation only. All storm water runoff must be diverted away from the pond. Storm water diversion ditches structures etc. must be designed to divert storm water generated from a 100-year storm event. Any contaminated storm water however must be collected and either discharged to the pond or disposed of appropriately.